



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

Memo: Collection of Specimens and Testing at the SCDHEC Bureau of Laboratories (BOL) May 7, 2009

Please note the following information regarding specimen collection and testing at the BOL.

This is NEW information regarding testing of non-typeable Influenza A.

1. The BOL continues to only test patients for swine-like Influenza A H1N1 that meet the suspect case definition established by the CDC.
2. **If a physician thinks that they have a suspect case and would like to test, please have them contact their local DHEC Epi to determine if testing is warranted.** If testing is warranted, specimens can be shipped to the BOL for testing. No specimens will be tested without being cleared by DHEC Epi. Phone numbers can be found on the [SC 2009 List of Reportable Conditions](#).
3. The CDC is unsure that rapid tests can detect this strain of swine flu. Therefore, patients that meet suspect case definition will be tested regardless of their rapid test result. You must still call Epi prior to sending these specimens.
4. **Specimen Collection:** Nasopharyngeal swabs in viral transport media (VTM) continue to be the preferred specimen type. However, the CDC has cleared the BOL real-time PCR test for use with 4 other specimen types: nasal swabs, throat swabs, dual throat/nasal swabs, and nasopharyngeal/nasal aspirates. All swabs must be placed in VTM and shipped on cold packs to the BOL. NP/nasal aspirates can be shipped on cold packs in a sterile tube with no VTM. PCR results are available within 24 hours. Instructions for collection follow at the bottom of this document.

Instructions for collecting a Nasopharyngeal Swab:

Use a polyester-tipped nasopharyngeal swab with a wire handle. **Do not use** calcium alginate tipped swabs, such as Calgiswabs. Insert the thin swab with a flexible wire into the nare. The swab is introduced flat and then pushed forward with gentle downward pressure on the lower nasal floor to the posterior wall of the nasopharynx. The swab is rotated for a few seconds before it is gently withdrawn. Place the swab into the tube containing transport medium, bending the swab handle to fit inside the tube. Complete 1 Request Form (DHEC form 1335) to accompany each tube. Include patient information, date collected, sender name and number and any pertinent travel or contact history, along with the outbreak number 09-999. For specimen site **mark NP**. Ship COLD within 24 hours on cold packs. Store tubes at 4° C prior to shipping.

Instructions for collecting a Nasal/Nasopharyngeal aspirate:

Attach a sterile suction catheter to a mucus trap and introduce the catheter into the nasopharynx until you encounter resistance. Withdraw the catheter about ½ an inch and apply suction to aspirate the

sample. Place the specimen in a sterile container. (Manual of Clinical Microbiology, 9th Ed.) Complete 1 Request Form (DHEC form 1335) to accompany each tube. Include patient information, date collected, sender name and number and any pertinent travel or contact history, along with the outbreak number 09-999. For specimen site **mark other and write in nasal aspirate**. Ship COLD within 24 hours on cold packs. Store tubes at 4° C prior to shipping. VTM is not required if this specimen is shipped cold within 24 hours.

Important points to remember:

- The BOL will only supply viral transport media to its Laboratory Influenza Surveillance Network Providers.
 - For non-Surveillance Network providers, ANY commercial viral transport media (VTM) is acceptable. Typically, VTM consists of protein such as bovine serum albumin or gelatin to stabilize the virus and antimicrobial agent in a buffered salt solution. Transport medium can be purchased commercially. Swabs should be placed in 2-3 ml of medium – larger volumes should not be used because of the dilution effect.
 - Swabs should be polyester tipped – do NOT send calcium alginate swabs – they interfere with the PCR assay.
 - Do NOT send culturette tubes (containing a sponge or agar) or dry swabs.
 - Please store specimens cold and ship COLD using your Infecon 5000 shippers (or something comparable) within 24 hours. This is critical for rapid results. Accurate PCR results cannot be assured on a specimen that is not shipped cold.
5. When shipping your specimen(s) to the BOL, please mark “Virology” on the outside of the box. This will ensure that it goes to the correct laboratory and makes it into the morning PCR run. PCR is only being performed once a day. This also ensures that the specimen remains refrigerated after delivery.
6. Results reporting and interpretation:
- a. Influenza A H1N1 (swine-like) = Confirmed strains of the H1N1 swine-like flu virus. No further testing to be done.
 - b. Influenza A H1 or Influenza A H3 = Seasonal strains of influenza.
 - c. Influenza A RNA not detected by real-time PCR = negative for Influenza A H1N1 (swine-like) and seasonal influenza.